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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,531	08/01/2001	Masato Hayashi	1076.40361X00	3502
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ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			EXAMINER HAILE, FEBEN	
			ART UNIT 2663	PAPER NUMBER

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/918,531

Applicant(s)

HAYASHI ET AL.

Examiner

Feben M. Haile

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 6 and 11 is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7-10, 12-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on August 01, 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. In view of applicant's amendment filed July 28, 2005, the status of the application is still pending with reference to claims 1-17.
2. The amendment filed is insufficient to overcome the rejection of claims 1, 3-5, 7-9, and 12-17, based upon the last Office action because:

**Regarding claims 1, 5 and 14**, the addition of: ... receivers through a mobile network including ... fails to further limit the scope of the claim. It can be interpreted by one of ordinary skill in the art that the Internet, or other types of communication networks used to connect the senders and receivers could be wired or wireless.

**Regarding claims 4, 8 and 13**, the addition of: ... wherein the mobile network comprises ... fails to further limit the scope of the claim. It can be interpreted by one of ordinary skill in the art that the Internet, or other types of communication networks used to connect the senders and receivers could be wired or wireless.

**Regarding claim 9**, the addition of: ... router in a mobile network ... and data packet through said mobile network to said first and second receivers ... fails to further limit the scope of the claim. It can be interpreted by one of ordinary skill in the art that the Internet, or other types of communication networks used to connect the senders and receivers could be wired or wireless.

**Regarding claim 12**, the addition of: in a mobile network including ... and router to retransmit ... fails to further limit the scope of the claim. It can be interpreted by one

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of ordinary skill in the art that the Internet, or other types of communication networks used to connect the senders and receivers could be wired or wireless.

**Regarding claim 15**, the addition of: A system according to claim 14, wherein said mobile network comprises a plurality of sub-networks ... fails to further limit the scope of the claim. It can be interpreted by one of ordinary skill in the art that the Internet, or other types of communication networks used to connect the senders and receivers could be wired or wireless and figure 1 units 102 and 103 provides a plurality of sub-networks within the multicast system.

**Regarding claims 16 and 17**, the addition of: router to retransmit said data packet through a mobile network ... fails to further limit the scope of the claim. It can be interpreted by one of ordinary skill in the art that the Internet, or other types of communication networks used to connect the senders and receivers could be wired or wireless.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, 7-9, & 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buskens et al. (US 5,905,871).

**Regarding claims 1 & 5,** Buskens discloses the limitations: transmitting first and second data packet from said sender to said first, second, third and fourth receivers (figure 1 and column 2 line 67 - column 2 line 2; a sender sends a single copy of data to all the receivers); detecting at said first, second, third and fourth receivers whether said first and second data packets are properly received (column 3 lines 8-11; receivers compile status messages); transmitting a first reception information signal from said first receiver to said first router by a first path (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver); transmitting a second reception information signal from said second receiver to said first router by a second path (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver); transmitting a third reception information signal from said third receiver to said first router by a third path (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver); determining, at said first router, in dependence upon said first, second and third reception information signals, whether said first, second and third receivers require re-transmission of said first and second data packets and, if so, transmitting information relating to said first, second and third reception information signals to said second router (figure 1 unit 105 and column 3 lines 8-13; the designated receiver reports the status of the receivers to another higher level designated receiver and retransmits lost packets).

Buskens fails to teach the limitations: determining, at said second router, whether said fourth receiver requires re-transmission of said data packet and, if not,

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instructing said first router to re-transmit said data packet to said first and second receivers.

Official notice is taken that the concept of a positive instruction or no instruction (silence) can be used to achieve the same result. In the instant application, the second router obtains an information signal from the first router and instructs the first router to resend the data, hence a positive instruction. In Buskens, a higher level receiver obtains a status signal from a lower level receiver but does not send an instruction. Not sending an instruction (silence) implies that it is okay for the lower level receiver to retransmit the data. Thus a positive instruction or silence can be used to achieve the same result.

It would have been obvious to one having ordinary skill in the art at the time the invention was made that choosing between silence or a positive instruction is a matter of design choice. The motivation for choosing silence being the number of transmissions between devices is decreased allowing for a more efficient use of bandwidth.

**Regarding claims 3 & 7,** Buskens discloses the limitations: receiving at said first router information relating to said data packet (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver).

**Regarding claims 4, 8 & 13,** Buskens discloses the limitations: wherein the network comprises a plurality of sub-networks (figure 1 units 102, 102 & 103).

**Regarding claim 9,** Buskens discloses the limitations: receiving a first message comprising information relating to receipt of a data packet by a first receiver (figure 1

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unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver), receiving a second message comprising information relating to receipt of a data packet by a second receiver (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver), determining in dependence upon said first and second messages whether said first and second receivers require retransmission of said data packet and, if so, transmitting a third message relating to receipt of said data packet by said first and second receivers to another router (figure 1 unit 105 and column 3 lines 8-13; the designated receiver reports the status of the receivers to another higher level designated receiver and retransmits lost packets).

Buskens fails to teach the limitations: receiving an instruction from said other router to retransmit said data packet to said first and second routers.

Official notice is taken that the concept of a positive instruction or no instruction (silence) can be used to achieve the same result. In the instant application, the second router obtains an information signal from the first router and instructs the first router to resend the data, hence a positive instruction. In Buskens, a higher level receiver obtains a status signal from a lower level receiver but does not send an instruction. Not sending an instruction (silence) implies that it is okay for the lower level receiver to retransmit the data. Thus a positive instruction or silence can be used to achieve the same result.

It would have been obvious to one having ordinary skill in the art at the time the invention was made that choosing between silence or a positive instruction is a matter of design choice. The motivation for choosing silence being the number of

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transmissions between devices is decreased allowing for a more efficient use of bandwidth.

**Regarding claim 12**, Buskens discloses the limitations: receiving at the first router, via a first path, first reception information relating to said data packet including information relating to the identity of the source of said first reception information (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver); receiving at the first router, via a second path, second reception information relating to said data packet including information relating to the identity of the source of said second reception information (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver); determining, at said first router, in dependence upon said first and second reception information signals, whether recovery of said data packet is required and, if so, transmitting information relating to said first and second reception information signals to said second router (figure 1 unit 105 and column 3 lines 8-13; the designated receiver reports the status of the receivers to another higher level designated receiver and retransmits lost packets).

Buskens fails to disclose the limitations: determining at said second router, whether further reception state information relating to said data packet identifying a further source is received and whether recovery of said data packet in respect of said further source is required instructing said first router to transmit said data packet for intended receipt by said sources of said first and second reception information.

Official notice is taken that the concept of a positive instruction or no instruction (silence) can be used to achieve the same result. In the instant application, the second



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router obtains an information signal from the first router and instructs the first router to resend the data, hence a positive instruction. In Buskens, a higher level receiver obtains a status signal from a lower level receiver but does not send an instruction. Not sending an instruction (silence) implies that it is okay for the lower level receiver to retransmit the data. Thus a positive instruction or silence can be used to achieve the same result.

It would have been obvious to one having ordinary skill in the art at the time the invention was made that choosing between silence or a positive instruction is a matter of design choice. The motivation for choosing silence being the number of transmissions between devices is decreased allowing for a more efficient use of bandwidth.

**Regarding claims 14 & 15**, Buskens discloses the limitations: a first router including: an input to receive a first reception information signal relating to whether said data packet is properly received by said first receiver and a second reception information signal relating to whether said data packet is properly received by said second receiver (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver); a processor to determine in dependence upon said first and second reception information signals, whether said first and second receivers require re-transmission of said data packet and an output to transmit information relating to said first and second detection information signals to said second router (figure 1 unit 105 and column 3 lines 8-13; the designated receiver reports the status of the receivers to another higher level designated receiver and retransmits lost packets);

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a second router including: an input to receive said information from the first router and a third reception information signal relating to whether said data packet is properly received by said third receiver a processor to determine whether said third receiver requires re-transmission of said data packet (figure 1 unit 105 and column 3 lines 8-13; the designated receiver reports the status of the receivers to another higher level designated receiver and retransmits lost packets).

Buskens fails to teach the limitations: an output to transmit an instruction to said first router to re-transmit said data packet to said first and second receivers.

Official notice is taken that the concept of a positive instruction or no instruction (silence) can be used to achieve the same result. In the instant application, the second router obtains an information signal from the first router and instructs the first router to resend the data, hence a positive instruction. In Buskens, a higher level receiver obtains a status signal from a lower level receiver but does not send an instruction. Not sending an instruction (silence) implies that it is okay for the lower level receiver to retransmit the data. Thus a positive instruction or silence can be used to achieve the same result.

It would have been obvious to one having ordinary skill in the art at the time the invention was made that choosing between silence or positive instruction is a matter of design choice. The motivation for choosing silence being the number of transmissions between devices is decreased allowing for a more efficient use of bandwidth.

**Regarding claims 16 & 17,** Buskens discloses the limitations: an input for receiving a first message comprising information relating to receipt of a data packet by a

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first receiver (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver); an input for receiving a second message comprising information relating to receipt of a data packet by a second receiver (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver), a processor for determining in dependence upon said first and second messages whether said first and second receivers require re-transmission of said data packet and an output for transmitting a third message relating to receipt of said data packet by said first and second receivers to another router if said first and second receivers require re-transmission of said data packet (figure 1 unit 105 and column 3 lines 8-13; the designated receiver reports the status of the receivers to another higher level designated receiver and retransmits lost packets).

Buskens fails to teach the limitations: an input for receiving an instruction from said other router to retransmit said data packet to said first and second receivers.

Official notice is taken that the concept of a positive instruction or no instruction (silence) can be used to achieve the same result. In the instant application, the second router obtains an information signal from the first router and instructs the first router to resend the data, hence a positive instruction. In Buskens, a higher level receiver obtains a status signal from a lower level receiver but does not send an instruction. Not sending an instruction (silence) implies that it is okay for the lower level receiver to retransmit the data. Thus a positive instruction or silence can be used to achieve the same result.

It would have been obvious to one having ordinary skill in the art at the time the invention was made that choosing between silence or positive instruction is a matter of design choice. The motivation for choosing silence being the number of transmissions between devices is decreased allowing for a more efficient use of bandwidth.

***Allowable Subject Matter***

4. The indicated allowability of claim 10 is withdrawn in view of the previous reference(s) to Buskens et al. (US 5,905,871). The rejections based on the previous cited reference(s) is as follows:

**Regarding claim 10**, Buskens discloses receiving a first message from a first network element comprising information relating to receipt of a data packet by a first receiver (figure 1 unit 104 and column 3 lines 8-11; receivers send status messages to a designated receiver), or if so, transmitting a third message relating to receipt of said data packet by said first and second receivers to third network element (figure 1 unit 105 and column 3 lines 8-13; the designated receiver reports the status of the receivers to another higher level designated receiver and retransmits lost packets).

Buskens fails to disclose determining whether a second message from a second network element comprising information relating to receipt of said data packet by a second receiver has been received and if not, instructing said first network element to re-transmit said data packet and receiving an instruction from said third network element to re-transmit said data packet to said first and second network elements.

Official notice is taken that the concept of a positive instruction or no instruction (silence) can be used to achieve the same result. In the instant application, the second router obtains an information signal from the first router and instructs the first router to resend the data, hence a positive instruction. In Buskens, a higher level receiver obtains a status signal from a lower level receiver but does not send an instruction. Not sending an instruction (silence) implies that it is okay for the lower level receiver to retransmit the data. Thus a positive instruction or silence can be used to achieve the same result.

It would have been obvious to one having ordinary skill in the art at the time the invention was made that choosing between silence or a positive instruction is a matter of design choice. The motivation for choosing silence being the number of transmissions between devices is decreased allowing for a more efficient use of bandwidth.

5. Claims 2, 6, and 11 are allowed. The following is a statement of reasons for the indication of allowable subject matter:

**Regarding claims 2 & 6,** the prior art of record fails to disclose or fairly suggest transmitting a request for information relating to said data packet from said first router to an archive router.

**Regarding claim 11,** the prior art of record fails to disclose or fairly suggest in dependence upon said first and second sets of information, determining the number data packets common to both first and second sets that are required for re-transmission and determining whether this number exceeds a predetermined number and if the

number does not exceed the predetermined number, instructing said first network element to re-transmit one or more of said plurality of data packets in dependence upon said first set of information and instructing said second network element to re-transmit one or more of said plurality of data packets in dependence upon said second set of information, if the number does exceed the predetermined number, transmitting a third message relating to said first and second sets of information to third network element and receiving an instruction from said third network element to re-transmit one or more of said plurality of data packets in dependence upon said first and second sets of information.

### ***Response to Arguments***

6. Applicant's arguments filed July 28, 2005 have been fully considered but they are not persuasive.

On page 15 of the amendment, the Applicant respectfully traverses that a person of ordinary skill in the art would not have considered modifying the system disclosed in Buskens to be a mobile network because moving a designated receiver out of range of a local group would cause retransmission within the local group to fail. The Examiner respectfully disagrees with the Applicant. In a communications network, a receiver (not a designated receiver) could be a mobile device that could move out of range of the local group. Since the receiver is not concerned with retransmission (function of the designated receiver), the receiver can move around without impacting the local group's ability for retransmission.

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**Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

a) Kall et al. (US 2003/0043786), Apparatus and Associated Method for Multicasting Data in a Radio Communications System

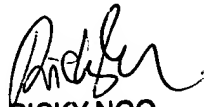
b) Fukushima et al. (US 2004/0264463), Method, Apparatus and System for Distributing Multicast Data

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Feben M. Haile whose telephone number is (571) 272-3072. The examiner can normally be reached on 6:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ft 10/31/2005

  
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